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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,991	12/17/1999	MICHAEL B ALLENSEN	124-749	1633

7590 02/13/2002
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EXAMINER

INZIRILLO, GIOACCHINO

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 02/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/445,991

Applicant(s)

ALLENSON ET AL.

Examiner

Gioacchino Inzirillo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-9,15and16 is/are rejected.
- 7) ☒ Claim(s) 4,5,10-14,17 and 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

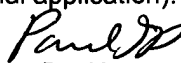
Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .


Paul Ip
Primary Examiner

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DETAILED ACTION

Amendment

The Preliminary Amendment received in the Office on the 17 December 1999 has not been entered, and will not be considered since it calls for amendments to claims 3, 9 and 16 that cannot be made, because the sections of the claims to be amended are not present in these claims.

Claim Objections

Claims 4, 10 and 17 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only, and claims 5, 11 – 14 and 18 are objected to because claims cannot depend from another multiple dependant claim. See MPEP § 608.01(n). Accordingly, claims 4, 5, 10 – 14, 17 and 18 have not been further treated on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 2, 3, 6 and 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tucker US 5,440,577 (herein after referred to as Tucker).

Regarding claims 1, 2, 3 and 7, Fig. 1 of Tucker is an embodiment of his invention, which is a series of connected semiconductor lasers, of which only three are shown for exemplary purposes.

As an electrical device, Tuckers invention inherently has an impedance. Tucker does however talk somewhat about impedances, see Tucker, column 1 line 64 to column 2 line 12. Tucker discusses in column 6 lines 5 – 44, and therein he teaches that the device quantum efficiency is greater than or equal to the individual quantum efficiency of one of the light emitting means. More specifically, in lines 5 – 11 of column 6 state that the external quantum efficiencies in excess of 100% are possible.

Regarding claim 6, see Fig. 1 of Tucker where it is shown that the device contains p-n junctions.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to

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the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tucker as applied to claims 1, 2, 3, 6 and 7 above. It is notoriously well known that lasers are at the heart of many communications systems. It would be obvious to one of ordinary skill in the art at the time the invention was made to include the laser of Tucker in a communications system for providing information channels since the laser since the Tucker laser would simplify such a communications system. Tucker's laser eliminates the need for impedance matching, and the excessive heat associated with it. As described by Tucker in column 1 line 64 to column 2 line 12, this impedance matching is necessary to modulate the laser at high frequencies, which one of ordinary skill in the art would know is common in communications systems.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tucker.

Regarding claim 8, although Tucker does not list these materials as being present in his device, the ones he does list are taught in column 5 lines 1 – 4. Therein he also teaches what one of ordinary skill in the art would know, that the materials can change based on the desired wavelength output. It would be obvious to one of ordinary skill in the art at the time the invention was made to substitute materials if a different output wavelength were desired.

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Regarding claim 9, reflective coatings are well known in the art, and it would be obvious to one of ordinary skill in the art at the time the invention was made to include one were it needed in the Tucker device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gioacchino Inzirillo whose telephone number is 703-305-1967. The examiner can normally be reached on M-F 8:30AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on 703-308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Gioacchino Inzirillo
Examiner *GI*
Art Unit 2828
January 30, 2002

Paul Ip
Paul Ip
Primary Examiner